

Notice of Allowability

Application No.

09/844,671

Examiner

Russell Frejd

Applicant(s)

THEKKATH ET AL.

Art Unit

2128

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to the Notice of Withdrawal sent on 25 April 2006.
2. ☒ The allowed claim(s) is/are 1-19 and 21.
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☐ All b) ☐ Some* c) ☐ None of the:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application. **THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
 5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO-1449 or PTO/SB/08), Paper No./Mail Date _____
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☐ Interview Summary (PTO-413), Paper No./Mail Date _____
7. ☒ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____

Russell Frejd
RUSSELL FREJD
PRIMARY EXAMINER

In re Application of: Thekkath et al.

Supplemental Allowance of Application # 09/844,671

1. The following communication is in response to Applicant's approval of the amendments to the specification and the claims proposed by the Examiner in response to the Notice of Withdrawal mailed on 25-April-2006. This communication intends to overcome the proposed 35 U.S.C. § 101 rejections raised in view of the new interim guidelines for subject matter eligibility.

Examiner's Amendment

2. An Examiner's Amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 C.F.R. 1.312. To ensure consideration of such an amendment, it **MUST** be submitted no later than the payment of the Issue Fee. Authorization for this Examiner's Amendment was given by Bill Galliani (Reg. No. 33,885) on 1-May-2006.

2.1 In the Specification:

Page 27 line 6 Change "brach/jump/operate" to --branch/jump/operate--.

Page 47 line 3 Delete "and as a computer data signal embodied in a computer usable (e.g., readable) transmission medium (e.g., carrier wave or any other medium including digital, optical or analog-based medium)".

2.2 In the Claims:

Cancel claim 20.

In re Application of: Thekkath et al.

Reasons for Allowance

3. The following is an Examiner's Statement of Reasons for the indication of allowable subject matter. The instant application is directed to a non-obvious improvement over the invention described in U.S. Patent No. 6,145,123 to Torrey, which is directed to tracing program execution in information processing system by turning trace functions on and off using breakpoint register architecture.

The improvement comprises a system and method for tracing instructions in a microprocessor core that supports execution of instructions in a plurality of instruction pipelines, wherein trace data for one or more instructions in a group of instructions issued together is held until all of the instructions in the group execute in the plurality of instruction pipelines, wherein information enabling determination of a static schedule of the group is transmitted along with trace data for the group, the static schedule indicating instruction execution sequence in the multiple instruction pipelines. This patentable distinction is included in each of the independent claims, nos. 1, 9, 17, and 18.

In a further embodiment, claim 21 includes an improvement for generating trace data associated with a plurality of instructions having a program order, wherein each of the plurality of instructions is executed by one of a plurality of instruction pipelines, and wherein the generated trace data includes program order information that enables a trace capture component to determine a relative order between instructions that were completed out of order by respective instruction pipelines.

The art of record, either individually or in combination, fails to teach, suggest, or render obvious the useful, concrete and tangible <method for tracing instructions in a microprocessor core> having the corresponding structure which is disclosed in the specification and equivalents

In re Application of: Thekkath et al.

thereof at least at page 3, paragraph 1016 through page 47, paragraph 1166, and Figures 1-9.

In view of the foregoing, the claims of the present application are found to be patentable over the prior art.

Response Guidelines

4. Any comments considered necessary by applicant **MUST** be submitted no later than the payment of the Issue Fee and, to avoid processing delays, should preferably accompany the Issue Fee. Such submissions should clearly be labeled "Comments on Statement of Reasons for Allowance".

4.1 Any response to the Examiner in regard to this allowance should be


directed to: Russell Frejd, telephone number (571) 272-3779, Monday-Friday from 0530 to 1400 ET, or the examiner's supervisor, Kamini Shah, telephone number (571) 272-2279. Inquires of a general nature or relating to the status of this application should be directed to the TC2100 Group Receptionist (571) 272-2100.

mailed to: Commissioner of Patents and Trademarks
P.O. Box 1450, Alexandria, VA 22313-1450

or faxed to: (571) 273-8300

Hand-delivered responses should be brought to the Customer Service Window, Randolph Building, 401 Dulany Street, Alexandria, VA, 22314.

Date: 4-May-2006



**RUSSELL FREJD
PRIMARY EXAMINER**